## SEQUENCE LISTING

```
<110> Schryvers, Anthony
<120> Transferrin Binding Peptides and Uses Thereof
<130> 028722-001
<150> US 60/444,113
<151> 2003-01-31
<160> 86
<170> FastSEQ for Windows Version 4.0
<210> 1
<211> 8
<212> PRT
<213> Homo sapiens
<400> 1
Val Lys Lys Asp Ser Gly Phe Gln
<210> 2
<211> 7
<212> PRT
<213> Homo sapiens
<400> 2
Met Asn Gln Leu Arg Gly Lys
<210> 3
<211> 11
<212> PRT
<213> Homo sapiens
Ser Cys His Thr Gly Leu Gly Arg Ser Ala Gly
<210> 4
<211> 11
<212> PRT
<213> Homo sapiens
<400> 4
Tyr Phe Gly Tyr Ser Gly Ala Phe Lys Cys Leu
                 5
                                     10
<210> 5
<211> 15
<212> PRT
```

```
<213> Homo sapiens
<400> 5
Gln Val Pro Ser His Thr Val Val Ala Arg Ser Met Gly Gly Lys
<210> 6
<211> 15
<212> PRT
<213> Homo sapiens
<400> 6
His Phe Gly Lys Asp Lys Ser Lys Glu Phe Gln Leu Phe Ser Ser
<210> 7
<211> 15
<212> PRT
<213> Homo sapiens
<400> 7
Met Tyr Leu Gly Tyr Glu Tyr Val Thr Ala Ile Arg Asn Leu Arg
<210> 8
<211> 15
<212> PRT
<213> Homo sapiens
<400> 8
Lys Lys Ser Ala Ser Asp Leu Thr Trp Asp Asn Leu Lys Gly Lys
                                   10 , 15
<210> 9
<211> 15
<212> PRT
<213> Homo sapiens
<400> 9
Asn Ile Pro Met Gly Leu Leu Tyr Asn Lys Ile Asn His Cys Arg
<210> 10
<211> 15
<212> PRT
<213> Homo sapiens
<400> 10
Leu Cys Met Gly Ser Gly Leu Asn Leu Cys Glu Pro Asn Asn Lys
<210> 11
<211> 15
```

```
<212> PRT
<213> Homo sapiens
<400> 11
Gly Tyr Tyr Gly Tyr Thr Gly Ala Phe Arg Cys Leu Val Glu Lys
<210> 12
<211> 7
<212> PRT
<213> Homo sapiens
<400> 12
His Ala Val Val Thr Arg Lys
                5 .
<210> 13
<211> 11
<212> PRT
<213> Homo sapiens
Thr Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg
                5
<210> 14
<211> 15
<212> PRT
<213> Homo sapiens
Lys Tyr Leu Gly Glu Glu Tyr Val Lys Ala Val Gly Asn Leu Arg
<210> 15
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 15
Met Gly Tyr Gly Met Ala Leu Ser Lys Ile Asn Leu His Asn Arg
               5
<210> 16
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 16
Ala Met Gly Tyr Gly Met Ala Leu Ser Lys Ile Asn Leu His Asn
                 5
                           10
```

```
<211> 14
<212> PRT
<213> M. catarrhalis
<400> 17
Met Gly Tyr Gly Met Ala Leu Ser Lys Ile Asn Leu His Asn
<210> 18
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 18
Gly Pro Val Gly Gly Val Phe Tyr Asn Gly Thr Thr Ala Lys
<210> 19
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 19
Trp Asn Leu Gly Pro Val Gly Gly Val Phe Tyr Asn Gly Thr Thr
                                     10
<210> 20
<211> 12
<212> PRT
<213> M. catarrhalis
<400> 20
Gly Pro Val Gly Gly Val Phe Tyr Asn Gly Thr Thr
<210> 21
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 21
Phe Met Thr Asp Val Ala Asn Arg Arg Asn Arg Phe Ser Glu Val
<210> 22
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 22
Ala Val Lys Tyr Lys Gly His Trp Asp Phe Met Thr Asp Val Ala
                                     10
```

```
<210> 23
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 23
Lys Gly His Trp Asp Phe Met Thr Asp Val Ala Asn Arg Arg Asn
                                   ' 10
<210> 24
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 24
Asp Phe Met Thr Asp Val Ala Asn Arg Arg Asn Arg Phe Ser Glu
                                    10 .
<210> 25
<211> 6
<212> PRT
<213> M. catarrhalis
<400> 25
Phe Met Thr Asp Val Ala
                5 .
<210> 26
<211> 15
<212> PRT
<213> M. catarrhalis
Ala Gly Trp Tyr Tyr Gly Ala Ser Ser Lys Asp Glu Tyr Asn Arg
<210> 27
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 27
Phe Ser Glu Val Lys Glu Asn Ser Gln Ala Gly Trp Tyr Tyr Gly
<210> 28
<211> 6
<212> PRT
<213> M. catarrhalis
<400> 28
Ala Gly Trp Tyr Tyr Gly
```

```
<210> 29
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 29
Phe Ser Asn Leu Gln Asp Arg His Lys Gly Asn Val Thr Lys Thr
<210> 30
<211> 4
<212> PRT
<213> M. catarrhalis
<400> 30
Phe Ser Asn Leu
<210> 31
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 31
Asn Phe Lys Glu Lys Lys Leu Thr Gly Lys Leu Phe Ser Asn Leu
                                     10
<210> 32
<211> 15
<212> PRT
<213> M. catarrhalis
Lys Lys Leu Thr Gly Lys Leu Phe Ser Asn Leu Gln Asp Arg His
<210> 33
<211> 15
<212> PRT
<213> M. catarrhalis
Gly Lys Leu Phe Ser Asn Leu Gln Asp Arg His Lys Gly Asn Val
<210> 34
<211> 6
<212> PRT
<213> M. catarrhalis
<400> 34
Gly Lys Phe Ser Asn Leu
```

```
<210> 35
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 35
Asp Ala Asn Ile His Gly Asn Arg Phe Arg Gly Ser Ala Thr Ala
<210> 36
<211> 8
<212> PRT
<213> M. catarrhalis
<400> 36
Asp Ala Asn Ile His Gly Asn Arg
                 5
<210> 37
<211> 15
<212> PRT
<213> M. catarrhalis
<400> 37
Lys Thr Glu Arg Tyr Asp Ile Asp Ala Asn Ile His Gly Asn Arg
<210> 38
<211> 15
<212> PRT
<213> M. catarrhalis
Tyr Asp Ile Asp Ala Asn Ile His Gly Asn Arg Phe Arg Gly Ser
<210> 39
<211> 11
<212> PRT
<213> M. catarrhalis
Tyr Asp Ile Asp Ala Asn Ile His Gly Asn Arg
                5
<210> 40
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB-binding peptides
<400> 40
```

```
Lys Lys Ser Ala Ser Asp Leu Thr Trp Asp Asn Leu Lys Gly Lys
<210> 41
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB-binding peptides
<400> 41
Asn Ile Pro Met Gly Leu Leu Tyr Asn Lys Ile Asn His Cys Arg
<210> 42
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB-binding peptides
Leu Cys Met Gly Ser Gly Leu Asn Leu Cys Glu Pro Asn Asn Lys
<210> 43
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB-binding peptides
<400> 43
Gly Tyr Tyr Gly Tyr Thr Gly Ala Phe Arg Cys Leu Val Glu Lys
<210> 44
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB-binding peptides
<400> 44
Cys His Leu Ala Arg Ala Pro Asn His Ala Val Val Thr Arg Lys
                5
<210> 45
<211> 15
<212> PRT
```

```
<213> Artificial Sequence
<220>
<223> TbpB-binding peptides
<400> 45
Gly Ser Asn Val Thr Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg
<210> 46
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB-binding peptides
<400> 46
Thr Asp Cys Ser Gly Asn Phe Cys Leu Phe Arg Ser Glu Thr Lys
<210> 47
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB-binding peptides
Lys Tyr Leu Gly Glu Glu Tyr Val Lys Ala Val Gly Asn Leu Arg
                 5
<210> 48
<211> 15
<212> PRT
<213> N. meningitidis
<400> 48
Phe Tyr Lys His Ala Ala Ser Glu Lys Asp Phe Ser Asn Lys Lys
<210> 49
<211> 15
<212> PRT
<213> N. meningitidis
<400> 49
Pro Ser Arg Gln Leu Pro Ala Ser Gly Lys Val Ile Tyr Lys Gly
                                     10
<210> 50
<211> 15
<212> PRT
```

```
<213> N. meningitidis
<400> 50
Val Ile Tyr Lys Gly Val Trp His Phe Val Thr Asp Thr Lys Lys
         5
<210> 51
<211> 15
<212> PRT
<213> H. influenzae
<400> 51
Ala Ala Leu Asn Leu Phe Asp Arg Asn Lys Pro Ser Leu Leu Asn
<210> 52
<211> 15
<212> PRT
<213> H. influenzae
<400> 52
Ala Pro Asn Ser Asn Glu Asn Arg His Gly Gln Lys Tyr Val Tyr
<210> 53
<211> 15
<212> PRT
<213> H. influenzae
<400> 53
Ile Gln Ser Trp Ser Leu Arg Asp Leu Pro Asn Lys Lys Phe Tyr
               5
                                    10
<210> 54
<211> 15
<212> PRT
<213> H. influenzae
<400> 54
Ser Ala Leu Pro Val Gly Gly Val Ala Thr Tyr Lys Gly Thr Trp
<210> 55
<211> 15
<212> PRT
<213> H. influenzae
<400> 55
Tyr Lys Gly Thr Trp Ser Phe Ile Thr Ala Ala Glu Asn Gly Lys
                                    10
<210> 56
```

<211> 15

```
<212> PRT
<213> H. influenzae
<400> 56
Arg Asn Ser Gly Gly Gln Ala Tyr Ser Arg Arg Ser Ala Thr
<210> 57
<211> 16
<212> PRT
<213> H. influenzae
<400> 57
Phe Thr Val Asn Asn Phe Gly Thr Lys Lys Leu Thr Gly Gly Leu Tyr
<210> 58
<211> 15
<212> PRT
<213> H. influenzae
<400> 58
Thr Asp Ala Asn Lys Ser Gln Asn Arg Thr His Lys Leu Tyr Asp 1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15
<210> 59
<211> 15
<212> PRT
<213> H. influenzae
Gly Lys Phe Leu Ala His Asp Lys Lys Val Leu Gly Val Phe Ser
                                      10
<210> 60
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB N-lobes of Bovine Pathgens
<400> 60
Met Val Lys Trp Cys Ala Ile Gly His Gln Glu Arg Thr Lys Cys
<210> 61
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB N-lobes of Bovine Pathgens
```

```
<400> 61
Cys Ala Ile Gly His Gln Glu Arg Thr Lys Cys Asp Arg Trp Ser
<210> 62
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB N-lobes of Bovine Pathgens
His Gln Glu Arg Thr Lys Cys Asp Arg Trp Ser Gly Phe Ser Gly
                 5
                                     10
<210> 63
<211> 7
<212> PRT
<213> Artificial Sequence
<223> bTF Binding Regions of the TbpB N-lobes of Bovine
      Pathgens
<400> 63
His Gln Glu Arg Thr Lys Cys
                 5
<210> 64
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB N-lobes of Bovine Pathgens
<400> 64
Lys Thr Ser Asp Ala Asn Ile Asn Trp Asn Asn Leu Lys Asp Lys
<210> 65
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB N-lobes of Bovine Pathgens
<400> 65
Ala Asn Ile Asn Trp Asn Asn Leu Lys Asp Lys Lys Ser Cys His
```

<210> 66

```
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> bTf Binding Regions of the TbpB N-lobes of Bovine
      Pathgens
<400> 66
Ala Asn Ile Asn Trp Asn Asn Leu Lys Asp Lys
<210> 67
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB N-lobes of Bovine Pathgens
Asn Ser Asn Glu Arg Tyr Tyr Gly Tyr Thr Gly Ala Phe Arg Cys
<210> 68
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB N-lobes of Bovine Pathgens
<400> 68
Arg Tyr Tyr Gly Tyr Thr Gly Ala Phe Arg Cys Leu Val Glu Lys
<210> 69
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> bTf Binding Regions of the TbpB N-lobes of Bovine
      Pathgens
<400> 69
Arg Tyr Tyr Gly Tyr Thr Gly Ala Phe Arg Cys
<210> 70
<211> 15
<212> PRT
<213> Artificial Sequence
```

<220>

```
<223> TbpB N-lobes of Bovine Pathgens
 <400> 70
Asn Thr Asp Gly Asn Asn Asn Glu Ala Trp Ala Lys Asn Leu Lys
                                     10
<210> 71
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB N-lobes of Bovine Pathgens
Asn Asn Asn Glu Ala Trp Ala Lys Asn Leu Lys Lys Glu Asn Phe
<210> 72
<211> 7
<212> PRT
<213> Artificial Sequence
<223> bTf Binding Regions of the TbpB N-lobes of Bovine
      Pathgens
<400> 72
Asn Leu Lys Lys Glu Asn Phe
<210> 73
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB N-lobes of Bovine Pathgens
<400> 73
Ala Trp Ala Lys Asn Leu Lys Lys Glu Asn Phe Glu Val Leu Cys
                                     10
<210> 74
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> bTf Binding Regions of the TbpB N-lobes of Bovine
      Pathgens
<400> 74
Asn Asn Asn Glu Ala Trp Ala Lys Asn Leu Lys
```

```
<210> 75
 <211> 15
 <212> PRT
 <213> Artificial Sequence
 <223> TbpB N-lobes of Bovine Pathgens
 <400> 75
Asn Leu Lys Lys Glu Asn Phe Glu Val Leu Cys Lys Asp Gly Thr
                  5
<210> 76
<211> 3
<212> PRT
<213> Artificial Sequence
<223> bTf Binding Regions of the TbpB N-lobes of Bovine
<400> 76
Asn Leu Lys
 1
<210> 77
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB N-lobes of Bovine Pathgens
<400> 77
Cys His Leu Ala Arg Gly Pro Asn His Ala Val Val Ser Arg Lys
                 5
<210> 78
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> TbpB N-lobes of Bovine Pathgens
Arg Gly Pro Asn His Ala Val Val Ser Arg Lys Asp Lys Ala Thr
                 5
                                                         15
<210> 79
<211> 15
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> TbpB N-lobes of Bovine Pathgens
His Ala Val Val Ser Arg Lys Asp Lys Ala Thr Cys Val Glu Lys
<210> 80
<211> 7
<212> PRT
<213> Artificial Sequence
<223> bTf Binding Regions of the TbpB N-lobes of Bovine
      Pathgens
<400> 80
His Ala Val Val Ser Arg Lys
<210> 81
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB N-lobes of Bovine Pathgens
<400> 81
Ser Arg Lys Asp Lys Ala Thr Cys Val Glu Lys Ile Leu Asn Lys
<210> 82
<211> 3
<212> PRT
<213> Artificial Sequence
<220>
<223> bTf Binding Regions of the TbpB N-lobes of Bovine
      Pathgens
<400> 82
Ser Arg Lys
<210> 83
<211> 15
<212> PRT
<213> Artificial Sequence
<223> TbpB N-lobes of Bovine Pathgens
<400> 83
Arg Asp Asp Thr Lys Cys Leu Ala Ser Ile Ala Lys Lys Thr Tyr
```

1 5 10 15 <210> 84 <211> 15 <212> PRT <213> Artificial Sequence <220> <223> TbpB N-lobes of Bovine Pathgens Lys Cys Leu Ala Ser Ile Ala Lys Lys Thr Tyr Asp Ser Tyr Leu 10 <210> 85 <211> 11 <212> PRT <213> Artificial Sequence <223> bTf Binding Regions of the TbpB N-lobes of Bovine Pathgens Lys Cys Leu Ala Ser Ile Ala Lys Lys Thr Tyr <210> 86 <211> 15 <212> PRT <213> Artificial Sequence <223> TbpB N-lobes of Bovine Pathgens <400> 86 Arg Ala Met Thr Asn Leu Arg Gln Cys Ser Thr Ser Lys Leu Leu 10